

## ABSTRACT

A lithographic apparatus having a supply to a space in the apparatus of a composition including at least one of one or more perhalogenated C<sub>1</sub>-C<sub>6</sub> alkanes and one or more compounds including one or more nitrogen atoms and one or more atoms selected from hydrogen, oxygen and halogen. The activation of the alkane(s) and compound(s) provides reactive species which are capable of highly selective etching of hydrocarbon species while minimizing damage to sensitive optical surfaces.